

Chapter 5.3

Placarding and marking of cargo transport units and bulk containers

5.3.1 Placarding

5.3.1.1 Placarding provisions

5.3.1.1.1 General provisions

- .1 Enlarged labels (placards) and marks and signs shall be affixed to the exterior surfaces of a cargo transport unit or bulk container to provide a warning that the contents of the unit or bulk container are dangerous goods and present hazards, unless the labels and/or marks affixed to the packages are clearly visible from the exterior of the cargo transport unit or bulk container.
- .2 The methods of placarding and marking as required in 5.3.1.1.4 and 5.3.2 on cargo transport units and bulk containers shall be such that this information will still be identifiable on cargo transport units and bulk containers surviving at least three months' immersion in the sea. In considering suitable marking methods, account shall be taken of the ease with which the surface of the cargo transport unit or bulk container can be marked.
- .3 All placards, orange panels, marks and signs shall be removed from cargo transport units and bulk containers or masked as soon as both the dangerous goods or their residues which led to the application of those placards, orange panels, marks or signs are discharged.

5.3.1.1.2 Placards shall be affixed to the exterior surface of cargo transport units and bulk containers to provide a warning that the contents of the unit are dangerous goods and present hazards. Placards shall correspond to the primary hazard of the goods contained in the cargo transport unit and bulk container except that:

- .1 placards are not required on cargo transport units carrying any quantity of explosives of division 1.4, compatibility group S; and
- .2 placards indicating the highest hazard only need be affixed on cargo transport units carrying substances and articles of more than one division in class 1.

Placards shall be displayed on a background of contrasting colour, or shall have either a dotted or solid outer boundary line.

For dangerous goods of class 9 the placard shall correspond to the label model No. 9 as in 5.2.2.2.2; label model No. 9A shall not be used for placarding purposes.

5.3.1.1.3 Placards shall also be displayed for those subsidiary hazards for which a subsidiary hazard label is required according to 5.2.2.1.2. However, cargo transport units and bulk containers containing goods of more than one class need not bear a subsidiary hazard placard if the hazard represented by that placard is already indicated by a primary hazard placard.

5.3.1.1.4 Placarding requirements

5.3.1.1.4.1 A cargo transport unit or bulk container containing dangerous goods or residues of dangerous goods shall clearly display placards as follows:

- .1 *a freight container, semi-trailer, a closed or sheeted bulk container or portable tank*: one on each side and one on each end of the unit. Portable tanks having a capacity of not more than 3,000 L may be placarded or, alternatively, may be labelled instead, on only two opposite sides;
- .2 *a railway wagon*: at least on each side;
- .3 *a multiple-compartment tank containing more than one dangerous substance or their residues*: along each side at the positions of the relevant compartments. If all compartments are required to display the same placards, these placards need to be displayed only once along each side of the cargo transport unit;
- .4 *a flexible bulk container*: in at least two opposing positions; and
- .5 *any other cargo transport unit*: at least on both sides and on the back of the unit.

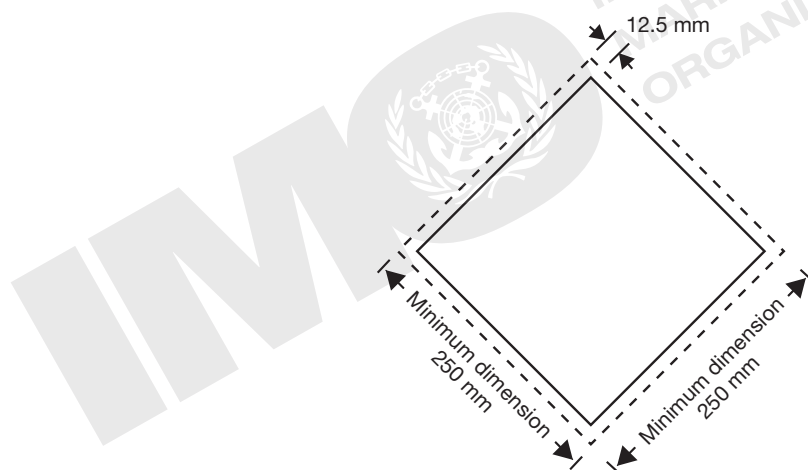
5.3.1.1.5 *Special provisions for class 7*

- △ 5.3.1.1.5.1 Large freight containers carrying unpackaged LSA-I material or SCO-I or SCO-III or packages other than excepted packages, and tanks, shall bear four placards which conform with the model No. 7D given in the figure. The placards shall be affixed in a vertical orientation to each side wall and each end wall of the large freight container or tank. Any placards which do not relate to the contents shall be removed. Instead of using both labels and placards, it is permitted as an alternative to use enlarged labels only, as shown in label model Nos. 7A, 7B and 7C, except having the minimum size shown in the figure under 5.3.1.2.2.
- 5.3.1.1.5.2 Rail and road vehicles carrying packages, overpacks or freight containers labelled with any of the labels shown in 5.2.2.2.2 as model Nos. 7A, 7B, 7C and 7E, or carrying consignments under exclusive use, shall display the placard shown in the figure (model No. 7D) on each of:
- .1 the two external lateral walls, in the case of a rail vehicle;
 - .2 the two external lateral walls and the external rear wall, in the case of a road vehicle.

In the case of a vehicle without sides, the placards may be affixed directly on the cargo-carrying unit provided that they are readily visible; in the case of physically large tanks or freight containers, the placards on the tanks or freight containers shall suffice. In the case of vehicles which have insufficient area to allow the fixing of larger placards, the dimensions of the placard as described in the figure may be reduced to 100 mm. Any placards which do not relate to the contents shall be removed.

5.3.1.2 **Specifications for placards**

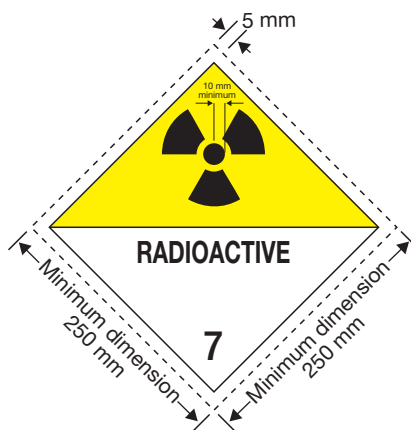
- 5.3.1.2.1 Except as provided in 5.3.1.2.2 for the class 7 placard, and in 5.3.2.3.2 for the marine pollutant mark, a placard shall be configured as shown in the figure below.



Placard (except for class 7)

The placard shall be in the form of a square set at an angle of 45° (diamond-shaped). The minimum dimensions shall be 250 mm × 250 mm (to the edge of the placard). The line inside the edge shall be parallel and 12.5 mm from the outside of that line to the edge of the placard. The symbol and line inside the edge shall correspond in colour to the label for the class or division of the dangerous goods in question. The class or division symbol/ numeral shall be positioned and sized in proportion to those prescribed in 5.2.2.2 for the corresponding class or division of the dangerous goods in question. The placard shall display the number of the class or division (and for goods in class 1, the compatibility group letter) of the dangerous goods in question in the manner prescribed in 5.2.2.2 for the corresponding label, in digits not less than 25 mm high. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

- 5.3.1.2.2 For class 7, the placard shall have minimum overall dimensions of 250 mm by 250 mm (except as permitted by 5.3.1.1.5.2) with a black line running 5 mm inside the edge and parallel with it, and shall be otherwise as shown in the figure below. When different dimensions are used, the relative proportions shall be maintained. The number “7” shall not be less than 25 mm high. The background colour of the upper half of the placard shall be yellow and of the lower half white; the colour of the trefoil and the printing shall be black. The use of the word “RADIOACTIVE” in the bottom half is optional to allow the use of this placard to display the appropriate United Nations Number for the consignment.



Placard for radioactive material of class 7

(No. 7D)

Symbol (trefoil): black.

Background: upper half yellow with white border, lower half white.

The lower half shall show the word **RADIOACTIVE** or alternatively, when required (see 5.3.2.1), the appropriate UN number and the figure '7' in the bottom corner.

5.3.2 Marking

5.3.2.0 Display of proper shipping name

5.3.2.0.1 The proper shipping name of the contents shall be durably marked on at least both sides of:

- .1 tank cargo transport units containing dangerous goods;
- .2 bulk containers containing dangerous goods; or
- .3 any other cargo transport unit containing packaged dangerous goods of a single commodity for which no placard, UN number or marine pollutant mark is required. Alternatively, the UN number may be displayed.

5.3.2.0.2 The proper shipping name for the goods shall be displayed in characters not less than 65 mm high. The proper shipping name shall be of contrasting colour with the background. This may be reduced to 12 mm for portable tank containers with a capacity of not more than 3,000 L.

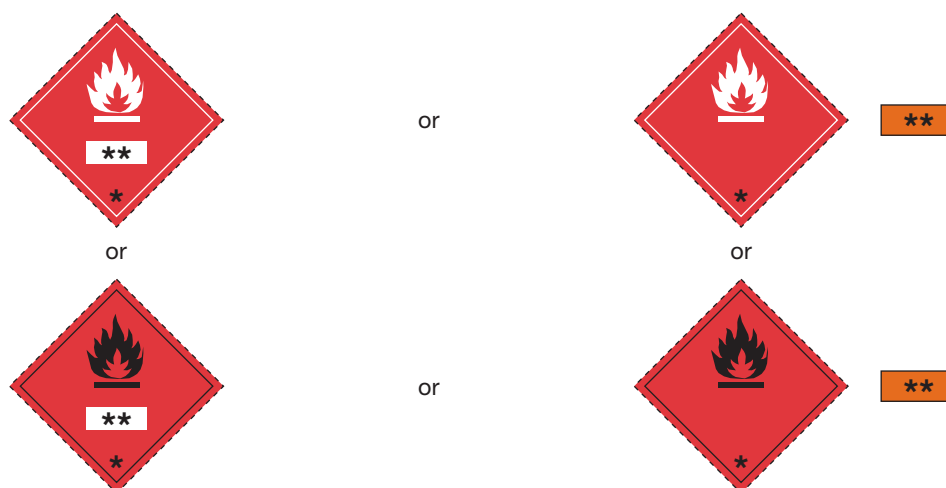
5.3.2.1 Display of UN numbers

5.3.2.1.1 Except for goods of class 1, the UN number shall be displayed as required by this chapter on consignments of:

- .1 solids, liquids or gases transported in tank cargo transport units, including on each compartment of a multi-compartment tank cargo transport unit;
- .2 packaged dangerous goods loaded in excess of 4000 kg gross mass, to which only one UN number has been assigned and which are the only dangerous goods in the cargo transport unit;
- △ .3 unpackaged LSA-I material, SCO-I or SCO-III material of class 7 in or on a vehicle, or in a freight container, or in a tank;
- .4 packaged radioactive material with a single UN number in or on a vehicle, or in a freight container, when required to be transported under exclusive use;
- .5 solid dangerous goods in bulk containers.

5.3.2.1.2 The UN number for the goods shall be displayed in black digits not less than 65 mm high, either:

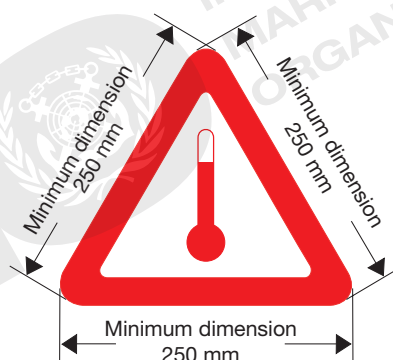
- .1 against a white background in the area below the pictorial symbol and above the class number and the compatibility group letter in a manner that does not obscure or detract from the other required placard elements (see 5.3.2.1.3); or
- .2 on an orange rectangular panel not less than 120 mm high and 300 mm wide, with a 10 mm black border, to be placed immediately adjacent to each placard or marine pollutant mark (see 5.3.2.1.3). For portable tanks with a capacity of not more than 3,000 L, the UN number may be displayed on an orange rectangular panel of appropriately reduced size on the external surface of the tank in characters not less than 25 mm high. When no placard or marine pollutant mark is required, the UN number shall be displayed immediately adjacent to the proper shipping name.

5.3.2.1.3 *Examples of display of UN numbers*

* location of class or division number
** location of UN number

5.3.2.2 **Elevated temperature substance mark**

5.3.2.2.1 Cargo transport units containing a substance that is transported or offered for transport in a liquid state at a temperature equal to or exceeding 100°C or in a solid state at a temperature equal to or exceeding 240°C shall bear on each side and on each end the mark shown in the figure below.



Mark for transport at elevated temperature

The mark shall be an equilateral triangle. The colour of the mark shall be red. The minimum dimension of the sides shall be 250 mm except for portable tanks with a capacity of not more than 3,000 L where the sides may be reduced to 100 mm. Where dimensions are not specified, all features shall be in approximate proportion to those shown.

5.3.2.2.2 In addition to the elevated temperature mark, the maximum temperature of the substance expected to be reached during transport shall be durably marked on both sides of the portable tank or insulation jacket, immediately adjacent to the elevated temperature mark, in characters at least 100 mm high.

5.3.2.3 **Marine pollutant mark**

5.3.2.3.1 Except as provided in 2.10.2.7, cargo transport units or bulk containers containing marine pollutants shall clearly display the marine pollutant mark in locations indicated in 5.3.1.1.4.1.

5.3.2.3.2 The marine pollutant mark for cargo transport units and bulk containers shall be as described in 5.2.1.6.3, except that the minimum dimensions shall be 250 mm × 250 mm. For portable tanks with a capacity of not more than 3,000 L, the dimensions may be reduced to 100 mm × 100 mm.

5.3.2.4 **Limited quantities**

Cargo transport units containing dangerous goods packed in limited quantities shall be placarded and marked according to 3.4.5.5.